

1. An apparatus for delivering a closure element into a passage communicating with an opening into a body lumen, comprising:

an elongate member comprising proximal and distal ends;

an annular clip carried by the elongate member for closing the opening;

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B7 a locator member coupled to the elongate member, the locator member having a distal portion extending distally beyond the distal end of the elongate member; and

one or more positioning elements on the distal portion of the locator member, the positioning elements being selectively expandable between a substantially axial collapsed configuration and a substantially transverse expanded configuration.

11. The apparatus of claim 1, further comprising a housing slidably disposed on an exterior of the elongate member, the housing configured for releasably holding the clip, the housing being actuable for advancing the clip distally towards the distal end of the elongate member for deploying the clip.

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13. The apparatus of claim 11, further comprising an actuator coupled to the housing, the actuator configured for advancing the housing distally to deploy the clip therefrom.

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In addition, please add the following new claims 46-47:

46. An apparatus for delivering a closure element into a passage communicating with an opening into a body lumen, comprising:

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an elongate member comprising proximal and distal ends;

a housing slidable along an exterior of the elongate member, the housing configured for releasably holding a closure element therein;

a locator member comprising a distal portion extending distally beyond the distal end of the elongate member; and

one or more positioning elements on the distal portion of the locator member, the positioning elements being selectively expandable between a substantially axial collapsed configuration and a substantially transverse expanded configuration.

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47. The apparatus of claim 46, wherein the elongate member and the locator member include cooperating detents for substantially securing the locator member axially with respect to the elongate member.

48. The apparatus of claim 46, further comprising an actuator coupled to the housing, the actuator configured for advancing the housing distally to deploy a closure element therefrom.

49. The apparatus of claim 48, wherein the actuator is further configured for automatically collapsing the positioning elements to the collapsed configuration upon advancement of the housing.

50. The apparatus of claim 48, further comprising a spring mechanism for biasing the housing distally upon activating the actuator.

51. The apparatus of claim 46, wherein each positioning element comprises a spline having a first fixed end and a second movable end, the second end being axially movable towards the first end to cause an intermediate region of the spline to expand transversely outward, thereby defining the substantially transverse expanded configuration.

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52. The apparatus of claim 46, further comprising an actuator coupled to the locator member, the actuator configured for selectively expanding the positioning elements from the collapsed configuration to the expanded configuration.

53. The apparatus of claim 52, wherein the actuator is configured for selectively expanding the positioning elements to one of a plurality of expanded diameters.

54. The apparatus of claim 46, wherein the elongate member comprises an introducer sheath, and wherein the locator member is insertable into a lumen of the sheath.

55. An apparatus for delivering a closure element into a passage communicating with an opening into a body lumen, comprising:

a tubular member comprising proximal and distal ends;

an annular housing overlying the tubular member and slidable towards the distal end of the tubular member;

an annular clip releasably carried within the housing; and

a locator member within the tubular member, the locator member having a distal portion extending distally beyond the distal end of the tubular member, the distal portion comprising a plurality of positioning elements, the positioning elements being selectively expandable between a substantially axial collapsed configuration and a substantially transverse expanded configuration.

56. The apparatus of claim 55, wherein the locator member is insertable into the tubular member, the locator member and tubular member comprising cooperating detents for substantially securing the locator member with respect to the tubular member.

57. The apparatus of claim 55, further comprising an actuator coupled to the housing for advancing the housing and the closure element therein towards the distal end of the tubular member for deploying the closure element from the housing.

58. The apparatus of claim 57, wherein the actuator is configured for automatically collapsing the positioning elements when the housing reaches a distal position for deploying the closure element.

59. The apparatus of claim 58, wherein the actuator is configured for retracting the positioning elements into the tubular member when the closure element is deployed or the housing.

60. A method for delivering a closure element into a passage communicating with an opening in a wall of a body lumen, the method comprising:

positioning an elongate member through a patient's skin towards the body lumen via the passage, the elongate member including a lumen extending between its proximal and distal ends;
and

providing a locator comprising a distal portion extending beyond the distal end of the elongate member and into the body lumen;

expanding one or more positioning elements on the distal portion of the locator from a collapsed configuration to an expanded configuration;

withdrawing the elongate member and locator partially until the positioning elements in their expanded configuration contact the wall of the body lumen, thereby providing a tactile indication of a location of the distal end of the elongate member; and

delivering a clip via the elongate member into the passage.

61. The method of claim 60, further comprising withdrawing the elongate member and locator from the body lumen and opening, leaving the clip to substantially close the opening.

62. The method of claim 60, wherein the elongate member comprises an introducer sheath, and wherein the method further comprises introducing one or instruments through the lumen of the sheath into the body lumen.

63. The method of claim 62, further comprising performing a diagnostic or therapeutic procedure using the one or more instruments at a location accessed via the body lumen.

64. The method of claim 63, wherein the body lumen comprises a blood vessel, and wherein the procedure comprises at least one of angioplasty, atherectomy, stent delivery, delivery of a therapeutic agent, and tissue ablation.

65. The method of claim 60, wherein the elongate member comprises a tubular body, wherein the locator is inserted into the tubular body and is axially fixed with respect to the tubular body when the locator is fully inserted into the tubular body.

66. The method of claim 60, wherein the step of delivering a clip comprises advancing a housing distally along an exterior of the elongate member, the housing releasably holding the clip therein.